New Journal of Chemistry 2016 vol.40 N12, pages 9981-9985

Complexes of non-lacunary Keggin- and Dawson-type polyoxometalates with Pb(ii): formation of 1D coordination polymers with different bonding modes

Udalova L., Adonin S., Abramov P., Korolkov I., Yunoshev A., Plyusnin P., Sokolov M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© The Royal Society of Chemistry and the Centre National de la Recherche Scientifique.A new coordination polymer based on Keggin-type [SiW12O40]4- and Pb2+ ions, {Pb2(μ2-DMF)2(DMF)8(SiW12O40)} (1a), was prepared by a reaction between H4[SiW12O40] and Pb(NO3)2 in N,N-dimethylformamide (DMF). Varying the crystallization conditions, a complex with a slightly different coordination mode of the {Pb2} unit and solvate composition, {Pb2(μ2-DMF)2(DMF)8(SiW12O40)}·DMF (1b), can be obtained. The complex containing Well-Dawson polyoxoanions, {(Pb(μ2-DMF)3(DMF)6)(Pb(DMF)5)(P2W18O62)}·0.5DMF·1.3H2O (2), was prepared by a similar strategy.

http://dx.doi.org/10.1039/C6NJ02155G